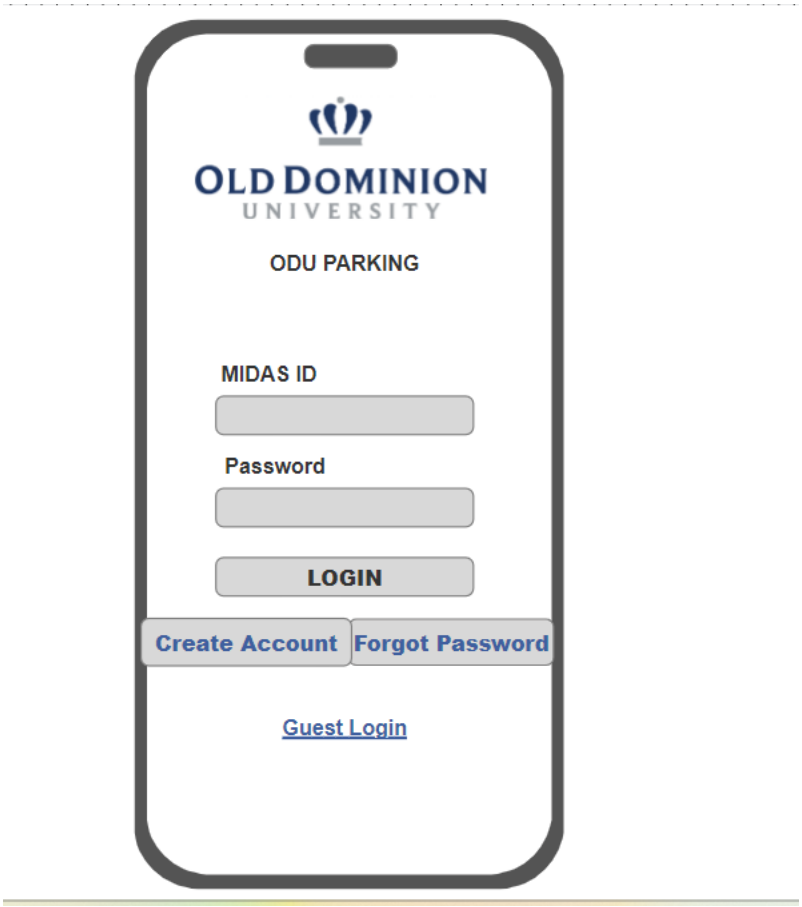
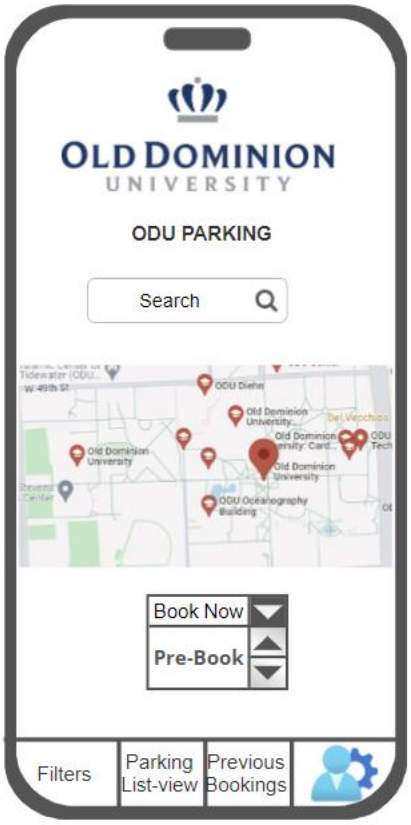
HW-4

For this assignment, I have chosen my previous hw-2 assignment problem scenario to build a wireframe. The problem I have chosen for hw-2 was about parking spot issue in and around ODU. I have chosen the scenario where students at ODU face challenges in finding parking spots efficiently on campus. Students often struggle to locate available parking spaces, resulting in wasted time and inconvenience. To address this issue, I propose the development of a mobile application that provides information about nearby parking options, allows filtering of free and paid spots, and offers a pre-booking feature. Through this, students can easily find a parking spot and spend less time in parking. Below is a wireframe I designed to solve this problem. Below is a screenshot of the main login page where users can login with their MIDAS ID and password. If a user is not a student, they can click on the guest login and use the parking app services.

- **Guest Login Button:** Allows users to access limited features without authentication.
- **Forgot Password Link:** Option to reset the password if needed.
- **Sign In Button:** Validates credentials and redirects to the main screen upon successful login.



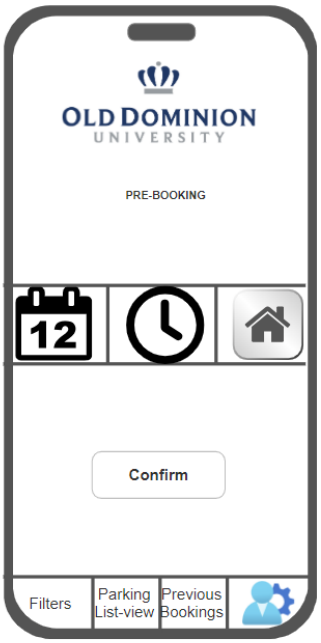
Below is the screenshot of the main screen of the wireframes after the user login to the parking application. The main screen acts as a page for the parking app, presenting users with essential information for finding and pre-booking parking spots.



- **Search Bar:** The search bar enables users to specify their desired location or choose from preset destinations.
- **Filter Options:** Checkboxes for free or paid parking help users tailor their search based on their preferences.
- **Map Display:** The interactive map visually represents nearby parking spots, aiding users in making informed decisions. Users can click on map pins to access detailed information about each parking location.
- **Parking List View:** Displays a list of available parking spots with relevant information.
- **Pre-booking Option:** The pre-booking feature allows users to reserve parking spots in advance, saving time during peak hours. This function aligns with user needs, particularly for part-time employees like Alex, who have fixed work schedules. Task scenario about Alex is discussed in the sections below.

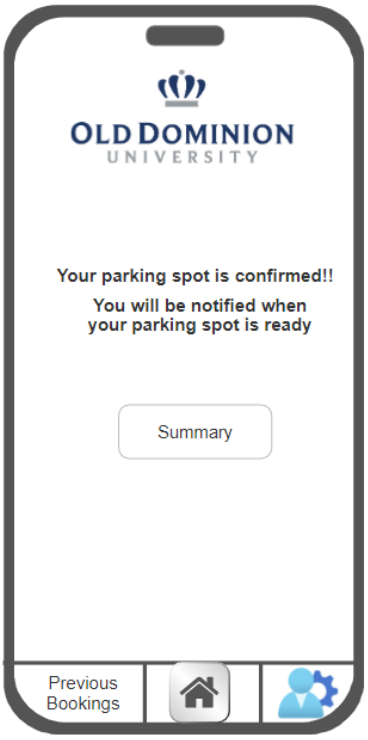
Below is the screenshot of the pre-booking screen. The pre-booking screen facilitates the process of reserving a parking spot for a specific date and time. It caters to users who want to plan their parking in advance, reducing stress during busy periods.

- **Calendar:** The calendar feature allows users to select the date for their parking reservation.
- **Time Selector:** Users can specify the desired time range for their parking reservation, offering flexibility based on their schedules.
- **Confirm Booking Button:** The "Confirm Booking" button finalizes the reservation, ensuring that the user's chosen parking spot is secured for the selected date and time.



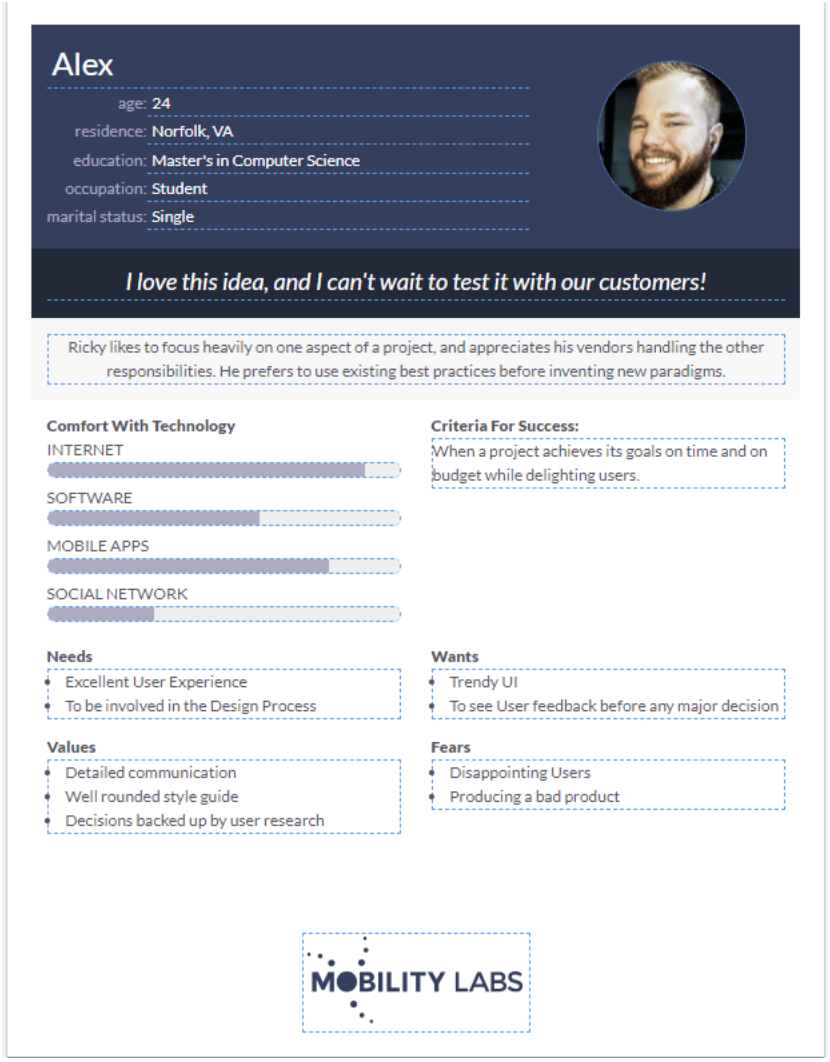
Below is the screenshot of the confirmation page displayed for users after they confirm their booking. It provides a visual confirmation for the users using the app.

- **Summary:** Displaying an order summary allows users to review their chosen date, time, and other relevant details after final confirmation.
- **Home Button:** The "Home" button offers users the option to return to the main screen, promoting easy navigation within the app.
- Like main screen, the user profile icon on this screen provides access to user-specific options, allowing users to manage their reservations and preferences effectively.



Persona:

Name: Alex
Age: 24
Occupation: Graduate student and part-time employee
Goal: Alex needs to efficiently find parking near the Perry Library on campus during his part-time work hours.



Task Scenarios:

1. Alex needs to find a nearby parking spot when he arrives at the Perry Library.
2. Alex wants to pre-book a parking spot for his part-time work shifts to save time.

Use Case:

Title: Finding and Pre-booking Parking
Actors: Alex
Description: Alex uses the university's parking app to search for available parking spots near the Perry Library. He can filter the results by free or paid spots and has the option to pre-book a parking spot for his upcoming part-time work shifts. Alex can either log in using his MIDAS ID or proceed as a guest user with limited features.

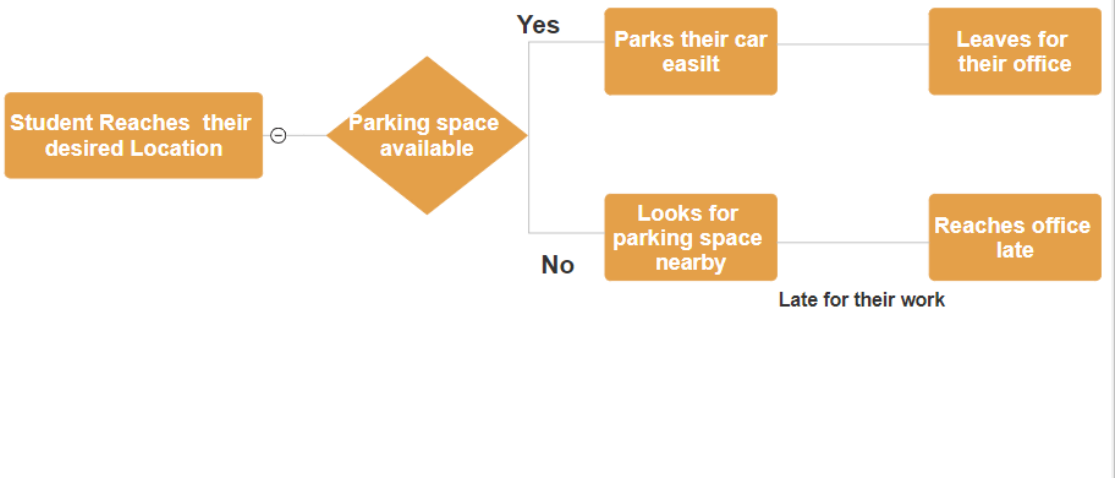
Interviewee:

I had a conversation with an ODU graduate student, who is a 24-year-old part-time employee and often faces challenges finding parking near the Perry Library during his work hours. The student suggested the idea for the application to streamline the parking process. Key points from our conversation includes:

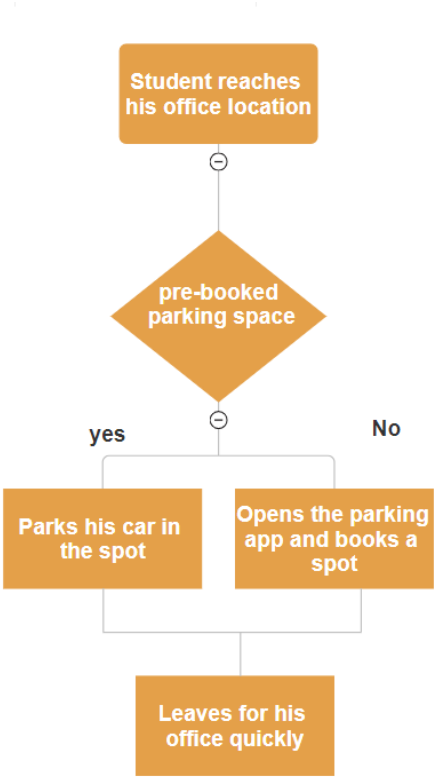
1. Student emphasized the need for an application providing information about nearby parking spots.
2. The student suggested a pre-booking feature to save time during part-time work shifts.
3. They also highlighted the importance of notifications to alert users when their parking spot is ready.

HTA- Hierarchical Task Analysis

Use case diagram of existing system:



Use case diagram for proposed system:



Use case diagram: